AMENDMENTS

Amendments to the Claims

1-30. (Canceled)

31. (Currently amended) A composition comprising ~~a Clostridial neurotoxin joined to a drug.~~

i) a Clostridial neurotoxin light chain which has enzymatic activity for a target substrate selected from the group consisting of SNAP-25, VAMP and Cellubrevin, and

ii) a Clostridial neurotoxin heavy chain which has binding specificity for a target nerve cell; and

b) a drug or other bioactive molecule joined to the light chain of the active neurotoxin,

wherein the active neurotoxin is internalizable by the target nerve cell.

32. (Currently amended) The composition of claim 31 wherein ~~said Clostridial neurotoxin is an active Clostridial neurotoxin.~~ the neurotoxin comprises a light chain selected from the group consisting of: tetanus toxin, botulinum toxin A, botulinum toxin B, botulinum toxin C, botulinum toxin D, botulinum toxin E, botulinum toxin F, and botulinum toxin G.

33. (Cancelled)

34. (Currently amended) The composition of claim 31 wherein ~~said drug is an intracellular acting drug.~~ the neurotoxin comprises a heavy chain selected from the group consisting of: tetanus toxin, botulinum toxin A, botulinum toxin B, botulinum toxin C, botulinum toxin D, botulinum toxin E, botulinum toxin F, and botulinum toxin G.

35-36 (Cancelled)

37. (New) A pharmaceutical composition for treatment of a neuromuscular dysfunction in a mammal, comprising:

a) a Clostridial neurotoxin comprising

i) a Clostridial neurotoxin light chain which has enzymatic activity for a target substrate selected from the group consisting of SNAP-25, VAMP and Cellubrevin, and

ii) a Clostridial neurotoxin heavy chain which has binding specificity for a target nerve cell; and

b) a drug or other bioactive molecule joined to the light chain of the active neurotoxin,

wherein the active neurotoxin is internalizable by the target nerve cell and a pharmaceutically acceptable excipient.

38. (New) The pharmaceutical composition of claim 37 wherein the neurotoxin comprises a light chain selected from the group consisting of: tetanus toxin, botulinum toxin A, botulinum toxin B, botulinum toxin C, botulinum toxin D, botulinum toxin E, botulinum toxin F, and botulinum toxin G.

39. (New) The pharmaceutical composition of claim 37 wherein the neurotoxin comprises a heavy chain selected from the group consisting of: tetanus toxin, botulinum toxin A, botulinum toxin B, botulinum toxin C, botulinum toxin D, botulinum toxin E, botulinum toxin F, and botulinum toxin G.

40. (New) The pharmaceutical composition of claim 37 wherein the neuromuscular dysfunction is characterized by uncontrollable muscle spasms.

41. (New) The composition of either of claims 31 or 37 wherein the drug or other bioactive molecule is an inhibitor of neurotransmitter release.

42. (New) The composition of either of claims 31 or 37 wherein the drug or other bioactive molecule is an active ingredient for treatment of botulism or tetanus.

43. (New) The composition of either of claims 31 or 37 wherein the drug or other bioactive molecule is selected from the group consisting of a GABA agonist, a neuronal calcium channel agonist, an adenosine agonist, a glutamate antagonist, a protein synthesis toxin, a zinc-dependent protease inhibitor, a neuronal growth factor, an antiviral agent, a nicotinic antagonist, a neuronal calcium channel blocker, an acetylcholine esterase inhibitor, a potassium channel activator, a vasamicol or a vasamicol inhibitor, a ribozyme, and a transcribable gene.